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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/761,327

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Arkadiy Peker

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EXAMINER

PARRIES, DRU M

ART UNIT

PAPER NUMBER

2836

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Skahn@microsemi.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/761,327	<b>Applicant(s)</b> PEKER ET AL.	
	<b>Examiner</b> DRU M. PARRIES	<b>Art Unit</b> 2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-43, 46 and 47 is/are rejected.
- 7) ☒ Claim(s) 44 and 45 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____                                                          | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed January 28, 2008 have been fully considered but they are not persuasive. Regarding the 112 rejections of claims 18, 19, and 46-47, the Examiner still doesn't understand the wording of these claims. For example, claim 18 reads in part, "said combiner is operative to signal at least one of said first power source and said second power source that that said combiner is operative..." First, what does it mean for the combiner "to signal a power source" (what exactly is the combiner doing?) and second, "that that" is believed to be a typo. Does the Applicant mean that the combiner is sending a signal to at least one power source to notify that the combiner is operative to produce said high power output? If so, the Examiner requests the claim to be re-worded to state that more clearly.
2. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. After the amendments, claim 7 contradicts itself. One can't have two separate power sources derived from the same power source.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1-6, 9-16, 18-35, 43, and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), Elkayam et al. (2003/0099076) and Ross (4,159,503). Regarding claims 1-3, 9, 20, 27, 35, 43 APA teaches a LAN comprising a powered device (80), a hub (30) with a controller (20), and communication cabling (60) connecting the powered device to the hub comprising first (the middle two pairs ) and second (the top and bottom pairs) sets of wire pairs carrying power and/or data. APA also teaches a first power source (40) being associated with midspan power insertion equipment (160). APA also teaches a second set of wires (top and bottom of Fig. 1c) used for communicating data. APA fails to explicitly teach a second power source, a combiner that combines the received first and second power source outputs and outputs a high power output. Elkayam teaches a LAN comprising first

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and second power sources (34, 36), each powering various loads (Fig. 2). Elkayam also teaches a control circuit operative to sense a high power signal and to supply said combined high power signal to a powered device in response to said sensed signal (Abstract, lines 7-12). Ross teaches a combiner (27, 40, and 42) that receives inputs from two different power sources (10, 12) and is capable of outputting a high power output (at 56) (Fig. 1). Ross also senses the successful operation of the combiner supplying a high power output (Col. 2, lines 12-16). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a second power source into APA's invention to allow for a more reliable and flexible system. With two sources the system can continue to work if one fails and allows for providing power to more and higher powered loads. It also would have been obvious to one of ordinary skill in the art at the time of the invention to implement Ross' combiner into APA's invention between the power output lines and a particular powered device, so that the output power to the device can be sufficient to allow the device to function properly.

8. Regarding claims 4, 10, 12, 14-16, 23, 30, 31, APA, Elkayam, and Ross fail to explicitly teach the location(s) of the first and second power sources and the combiner in APA's invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the first and/or second power source associated with the hub and/or the midspan power insertion equipment and to have the combiner inside or outside of the powered device/load, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

9. Regarding claims 5 and 6, one could say that the first and second power sources are isolated and simultaneously not isolated from each other. They are isolated initially from each

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other at their outputs, and then once the combiner combines their signals, one could say they are not isolated from each other at that point.

10. Regarding claims 11, 13, 21, 28, none of the references explicitly teach the elements of the LAN system conforming to the IEEE 802.3af-2003 standard, however, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the elements of APA's LAN system conform to the above IEEE standard so that the system will function safely and in correlation with most systems around the world and therefore could easily be implemented into another system.

11. Regarding claims 18, 19, 46 and 47, Elkayam teaches identifying the powered devices and determining the output voltage necessary before supplying the output to the powered device (Abstract). Also, Ross' combiner is always operative to produce said high power output. Therefore, the signal in Elkayam that identifies the output voltage necessary is the signal to the power sources that notifies them that the combiner is operative to produce said high power output, then the controller will control the combiner to output high power. The above signal operation initiates (changes) the class identification (of the connected powered device).

12. Regarding claims 22 and 29, Elkayam teaches one of the loads in his LAN system being a communication device, such as a computer ([0069]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have one of the loads in APA's LAN be a computer to be able to communicate in the LAN system.

13. Regarding claims 24-26, 32-34, it is known that computers have high (normal operation) and low (idle operation/sleep mode ) power modes. Also, in general, if a load is being supplied with low power from the combiner, it will subsequently operate in low power mode, and same

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with being supplied with high power. Also, as stated earlier, Elkayam identifies and determines the output voltage required for the powered devices, and the power sources and combiner respond accordingly. Therefore, if a device is determined to be in low power mode (absence of sensed combined high power), then the combiner will supply low power to said device. Also, the combiner is operative to signal to the load (via a low voltage output) of said low power supply operation.

14. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), Elkayam et al. (2003/0099076) and Ross (4,159,503) as applied to claim 1 above, and further in view of Parsi et al. (6,856,629). APA, Elkayam, and Ross teach an electrical system as described above. They fail to explicitly teach the hub operating according to 10 Base-T. Parsi teaches a network comprising a hub operating according to 10 Base-T (bottom of Col. 6, top of Col. 7). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the hub operate according to 10 Base-T since APA was silent as to the operation of the hub and Parsi teaches a method of operation known in the art to work.

15. Claims 36-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art (APA), Elkayam et al. (2003/0099076) and Ross (4,159,503) as applied to claim 27 above, and further in view of Larner (4,028,559). APA, Elkayam, and Ross teach an electrical system as described above. They fail to explicitly teach the combiner having two primary windings and one secondary winding nor DC/DC converters. Larner teaches a combiner comprising a transformer (T) having a first primary (b-a; part of the first DC-DC converter) associated with a first power source (VZ1), a second primary (b'-c; part of the second DC-DC converter) associated with a second power source (VZ2), and a secondary (d-e; part of both DC-

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DC converters) associated with a combined higher power. Therefore, one could say the first and second DC-DC converters are in series (on the secondary side) and in parallel (on the primary side). Larner also teaches a PWM controller (for SW1&SW2) associated with both the first and second DC-DC converters. It would have been obvious to one of ordinary skill in the art at the time of the invention to implement Larner's combiner circuitry into the combiner of the modified APA invention since Larner teaches a configuration that is known in the art and would allow for a wider range of outputs from the combiner.

*Allowable Subject Matter*

16. Claims 44 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,



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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dru M. Parries whose telephone number is (571) 272-8542. The examiner can normally be reached on Monday -Thursday from 9:00am to 6:00pm. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry, can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael J Sherry/

Supervisory Patent Examiner, Art Unit 2836

DMP

4-11-2008